

Central Treatment Plant Committee Meeting Notes
 Couer d'Alene, Idaho
 Thursday October 2, 1997

Attendees: Geoff Harvey, Curt Fransen, Ian von Lindern, Tom Bourque, Mike Fitzgerald, Nick Zilka, Rob Hanson

Steps to Take to Address the CTP issue.

Also listed are tasks that were assigned and the responsible person.

1. Letter to EPA about State position regarding O&M and long term operation of the CTP. > Curt Fransen
2. Dr. Ralston will evaluate inflows into the mine to identify areas where inflow can be reduced. He will also look at overall water management within the mine and evaluate potential sludge disposal locations. > TerraGraphics
3. Evaluate the potential to redirect RA money that would be used for constructing ponds on the CIA to pumping down the water level in the mine to create additional surge capacity in the mine. > No assignment made
4. Evaluate avoided cost by reducing water infiltration into mine and pumping down mine to create surge capacity compared to operating the CTP. > TerraGraphics
5. Work with Hopper to identify a water treatment technology that will work in the mine. This would include locating grant and loan opportunities. > No assignment made.
6. Develop a memo discussing the strategy identified in today's meeting. > Rob Hanson

Next meeting will occur sometime after the Ralston memo.

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Strategies for Addressing the Treatment of Acid Mine Water from the Bunker Hill Mine

The State of Idaho has formed a committee to address issues related to the long term issues related to treatment of acid mine water from the Bunker Hill Mine. In the Support Agency Cooperative Agreement and the Comprehensive Cleanup Plan, the State of Idaho and EPA agreed that interim water treatment would be part of the Phase I Remedial Action (RA). Neither the State or EPA have committed to upgrading the CTP or constructing a new plant as part of RA at the site. The State has also not committed to ensuring the operation and maintenance of the CTP at any time. Once Interim water treatment has terminated, there is no mechanism to facilitate continued operation.

Both the State and EPA would like to see the mine owner take responsibility for treating the water coming from the mine. The mine water makes up the bulk of the water being treated. The remaining water being treated now is collected surface flow from the site and is a Superfund obligation. This contaminated water is expected to diminish to zero over the next few years as source control efforts take hold.

An additional issue that the site will have to address are the standards that will be developed as part of the TMDL process. These standards will require a significant reduction (about 90%) in metals per day coming from the CTP. This level of performance will be difficult and expensive to achieve with the CTP.

The mission of the State of Idaho CTP Committee is to develop a strategy for addressing the mine water treatment for the long term. The Committee developed the following strategies.

1. **Minimize the amount of water that has to be treated.** This involves using RA money to reduce inflow of water that contributes to acid drainage in the mine and developing an overall site water management plan that would separate relatively clean water from the acidic water. It is believed that the cost of this work could be easily justified by a simple cost avoidance of treatment calculation. Additionally, actions of this sort would become the responsibility of the mine owner since the mine is the direct beneficiary of such work.
2. **Develop a sludge repository and create additional surge capacity in the mine.** There is a short term need for augmenting sludge disposal and surge capacity for continued operation of the CTP through the end of the current phase of site cleanup. The costs for constructing a sludge pond with a six to seven year capacity and a new surge pond on the CIA are not in the CTM budget. Costs for these ponds are estimated to be about \$3M. By creating these facilities in the mine with a much longer planned lifetime for the sludge disposal

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facility, the project would avoid the costs of investing \$3M into facilities that would impact future uses of the CIA and in the case of the sludge pond be only temporary. It is believed that the investment of RA money in helping to pump down the mine water and develop a sludge disposal facility in the mine would be much less than \$3M. These facilities would again become the responsibility of the mine owner since the mine is the direct beneficiary of such work.

3. **Work with the mine owner to identify and install an effective treatment system for the remaining acid water flow.** The CTP is at the end of its design lifetime. A new treatment plant will need to be constructed to treat the contaminated mine water. An in-mine system may be preferable. There should be no RA money used to construct such a plant. This should be the mine owner's responsibility. However, the State and EPA can work with the mine owner to identify appropriate technologies and potential sources of money to aid the mine owner in constructing the plant. Implementation of the first and second strategies discussed above will reduce the amount of water that would need to be treated and also establish the facilities needed to effectively operate a plant. This should reduce overall costs of water treatment and make it more possible for the mine owner to construct his own treatment facility.

Steps have been taken to investigate the potential for implementing the first strategy. Dr. Ralston of the University of Idaho has visited the site and has identified areas that have the greatest potential for reducing inflow into the acid producing ore body. These recommendations are being considered in the Milo Creek Flood Control Project engineering design that is being conducted by TerraGraphics. Dr. Ralston was also asked to look at overall water management in the mine and potential sludge disposal locations.